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09/936,961	01/29/2002	Lars Egnell	AB-1162 US	2906

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EXAMINER	
BELLO, AGUSTIN	
ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/936,961	EGNELL, LARS	
	Examiner	Art Unit	
	Agustin Bello	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "their first and second output terminals" in line 14. There is insufficient antecedent basis for this limitation in the claim. The claim fails to positively recite that the first and second opto-electric converters each have a first and second terminal.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henmi (U.S. Patent No. 6,137,603) in view of Yamane (U.S. Patent No. 5,434,691).

Regarding claim 1, Henmi discloses an insertion node that functions like a receiver transponder to be used in an optical add and drop node connected in a two-fiber network (fig. 1), characterized by first and second optoelectric converters for converting received optical signals to electric signals and each having an optical input terminal and an output terminal (1052, 1053, fig. 2, obviously, the optical receivers function like optoelectric converters to provide electrical

signals to the electrical switch 1072), the first optoelectric converter having its optical input terminal connected to an optical fiber carrying light signals from a first direction for receiving the light signals and for converting them to electric signals (fig. 2, the first optoelectric 1052 has an input connecting to the working fiber 1021 to receive the optical signals, convert them to electrical signals, and output them via the connection to switch 1072) and the second optoelectric converter having its optical input terminal connected to an optical fiber carrying light signals from a second direction opposite the first direction for receiving the light signals and converting them to electric signals on a first output terminal (fig. 2, the second optoelectric converter 1053 has an input connecting to the protection fiber 1022 to receive the optical signals, convert them to electrical signals, and output them via the connection to switch 1072), each opto-electric converter generating an output signal carrying light signal power information (inherent in the received signal) and a supervisory channel on a monitor output terminal (e.g. the "intensity modulated light with a wavelength different from that of the main signal" of column 1 lines 26-44; the output of the opto-electric converter of Henmi also outputting the supervisory channel), an electronic switch having two signal input terminals (1072, fig. 2 and col. 1, lines 35-37) and a signal output terminal (fig. 2), the two optoelectric converters connected with their first and second output terminals to the two signal input terminals of the electronic switch (outputs of optoelectric converters 1052 and 1053 are connected to the input of the electrical switch 1072). Although Henmi does not disclose the switch 1072 is controlled by a control signal, Henmi does disclose the switch 1072, which selects signals from one of the two input terminals (col. 1, lines 35-37). Therefore, there must be some kind of control signal applied to the switch 1072 in order to direct the switch to select signals from one of the input terminals. Furthermore, Yamane, from

the same field of endeavor, teaches transmitter/receiver devices each of which has a switching control signal (switching control,-fig. 3) to control the switching units (6 and 60, fig. 3) in both active and protection system. Therefore, it would have been obvious to one having ordinary skill in the ad at the time the invention was made to provide the switching unit of Henmi with a switching control signal as taught by Yamane in order to direct the switch to properly select signals from the working link or a protection link.

Regarding claim 7, Henmi discloses a protected two-fiber network comprising optical add and drop nodes connected by links to form a ring (nodes 101 1-1014, fig. 1), first optical fibers connected to form a first ring and transmitting light signals in a first direction (1021, fig. 1) and second optical fibers connected to form a second ring parallel to the first ring and transmitting light signals in a second direction opposite the first direction' (1022, fig. 1), each optical add and drop node comprising a receiver transponder and a switch for choosing a direction from which information on a channel terminated in the considered optical add and drop node is to be received in the node (figure 2 shows the components of each optical add and drop node in the two-fiber ring network of figure 1 that comprises a receiver transponder and a switch that has all the functions as disclosed in the rejection of claim 1 above).

6. Claims 2-6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henmi in view of Yamane (U.S. Patent No. 5,434,691) and further in view of Kitamura (U.S. Patent No. 5,130,837).

Regarding claims 2 and 8, the combination of Henmi and Yamane discloses all the aspects as applied to claims 1 and 7 above, except fails to teach an electronic reshaping circuit having an input terminal and an output terminal, the input terminal connected to the signal output

terminal of the electronic switch for reshaping a signal output from the electronic switch. However, Kitamura, from the same field of endeavor, teaches an optical repeater having a regeneration circuit (16, fig. 1) that provides reshaping function like an electronic reshaping circuit having an input terminal and an output terminal (fig. 1), the input terminal connected to the signal output terminal of the electronic switch for reshaping a signal output from the electronic switch (fig. 1 and fig. 5, the input terminal of the regeneration circuit is connected indirectly to the signal output terminal of the electronic switch 64a via the interface unit 16). Therefore, it would have been obvious to one having ordinary skill in the ad at the time the invention was made to incorporate the regeneration circuit of Kitamura into the combination of Henmi and Yamane and place after the electronic switch in order to reshape the electrical signal from the output of the electronic switch to obtain higher quality signals.

Regarding claims 3 and 9, the combination of Henmi and Yamane discloses all the aspects as applied to claims 1 and 7 above, except fails to teach an electronic reshaping circuit is also arranged to clean the signal output from the electronic switch from a supervisory channel. However, Kitamura, from the same field of endeavor, teaches an optical repeater having regeneration circuit (16, fig. 1), which obviously can be used to amplify/retime/reshape the digital signal coming from the supervisory device 40, therefore, it can be interpreted as "clean" the signal output from the electronic switch from a supervisory channel. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the regeneration circuit of Kitamura into the combination of Henmi and Yamane in order to provide additional conditioning for the output signals to achieve a higher signal quality.

Regarding claims 4 and 10, the output signal from the regeneration circuit inherently has a certain power level, which can be considered as "a predetermined electric power".

Regarding claims 5, 6, 11 and 12, the combination of Henmi and Yamane discloses all the aspects as applied to claims 1 and 7 above, except fails to teach the output terminal of the electronic reshaping circuit connected to the input terminal of the laser, the laser producing a light signal provided to a client layer. However, Kitamura, from the same field of endeavor, teaches the output terminal of the regeneration circuit (16, fig. 1) connected to the input terminal of the laser (LD, fig. 1 and col. 1, lines 58-61), the laser producing a light signal provided to a client layer (fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the regeneration circuit 16 with the laser diode 17 of Kitamura having the input connecting to the output of the regeneration circuit into the combination of Henmi and Yamane in order to provide the optical signals for transmission down the line.

Response to Arguments

7. Applicant's arguments filed 6/01/06 have been fully considered but they are not persuasive. The applicant argues that the submitted amendments distinguish the claimed invention from the cited prior art. However, as noted above, Henmi in particular and the combination of Henmi and Yamane continue to meet the claimed invention.

The applicant further argues that the combination of references fails to specifically teach producing a light signal provided to a client layer. However, this language is clearly met by the combination of references in that a light signal is produced via lasers 17 and used in an optical

network which clearly includes clients and therefore includes, what the applicant generically refers to as a "client layer."

8. Applicant's arguments filed 1/26/06 have been fully considered but they are not persuasive. The applicant argues that the newly added limitation distinguishes the instant application from the prior art. However, the examiner disagrees. The examiner notes that any optical signal, when received, will inherently contain light signal power information by it's mere presence. This is particularly true when one considers that the signal used in the system of Henmi is an intensity-modulated signal, wherein information is carried based on changes in the signal's intensity.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AGUSTIN BELLO
PRIMARY EXAMINER